Demand-side Determinants: The Ecology of Financial Inclusion

Ms. Miral Sherin Hassan and **Associate Prof. of Economics Dr. Heba Ghoneim**

The German university in Cairo

20TH ANNIVERSARY German University in Cairo

miral.sherin@guc.edu.eg hebatallah.ghoneim@guc.edu.eg

Introduction

International organizations, central banks, policy makers, researchers as well as stakeholders are becoming more concerned with financial inclusion (The World Bank, 2014). Attention is devoted to financial inclusion because -in a nutshell- financial inclusion contributes to growth, stability and global development (Soederberg, 2013). Precisely, Egypt is taking steps toward financial inclusion. Governments exert effort in terms of banking penetration and access (Egypt today, 2018). However, the usage of financial services remains relatively limited by consumers (Demirgüç-Kunt et al., 2018). This research is highly motivated to offer understanding to the financial inclusion from the demand side perspective. A proper implementation of financial inclusion is first done by the government, but it must also be implemented by its citizens (Ayadi et. al, 2018). The reasons behind the lack of demand are important to investigate through the user perception (Claessens, 2006). Hence, the objective of this paper is to understand the pattern of the usage of financial services and evaluate how far financial literacy will lead to financial inclusion, as it will help provide answers and suggestions to policy makers. Additionally, the aim of this research is to shed light on the degree to which people trust financial institutions as well as considering different socio-economic variables.

Literature Review

Financial inclusion is a process of delivering useful and affordable financial products and services in sustainable manners, while guaranteeing its accessibility to all members of the society (Worldbank, 2018). It means all members of an economy have access to and use the formal financial system (Allen et al., 2016; Raza, Tang, Rubab, &Wen, 2019). This does not only include banking products but also other products such as insurance, pension, and remittances at an affordable cost (Sethi, & Acharya, 2018). In a similar sense, it refers to financial products and services to both individuals and businesses that meet their needs; transactions, payments, savings and credit (Worldbank, 2018).

The various definitions of financial inclusion have common elements; three important aspects/ dimensions of financial inclusion are commonly tackled and agreed upon in research studies are access, usage and quality (Hannig, Jansen, 2010; Tram, Lai, & Nguyen, 2021).

A number of those considered to be financially included are not making enough use of available financial products and services provided by formal financial institutions and some tend to opt for informal financial alternatives. The literature refers to them as "underbanked" or "marginally banked" and some even consider them similar to those financially excluded (Kempson et al. 2004; Le, Chuc, & Taghizadeh-Hesary, 2019; Erlando, Riyanto, & Masakazu, 2020). Accordingly, usage encompasses more than the ownership of an account, it is concerned with the actual activities that take place within accounts in a formal financial institution (Avom, Bangaké & Ndoya, 2021). It includes more particularities about the level and pattern; frequency, regularity, and duration of use over time as well as methods of payment usage (Jukan & Softic, 2016; Demirguc-Kunt and Klapper, 2012).

Multiple barriers are causing a slowdown in achieving financial inclusion (Demirgüç-Kunt & Klapper, 2013), two of which are financial illiteracy (Atkinson and Messy, 2012) and lack of trust (Global Findex, 2017). Limited financial literacy serves as an important barrier to the demand for financial products/services (Braunstein and Welch, 2002). With low levels of financial literacy, the consumer/ citizen becomes more resistant or even more ignorant towards financial inclusion which limits the results of constant efforts and initiatives applied to improve the state of financial inclusion (Allen et al., 2016; Akileng, et al. 2018). Demanding households and businesses to make choices in financial markets without the basic knowledge creates a burden for them and the society as a whole (Remund, 2010).

Hogarth (2002) defined financial literacy as the way people understand and use knowledge of basic financial concepts to plan and manage financial decisions as in insuring, investing, saving and budgeting. In many definitions financial literacy is closely related to money management and finance and is defined as having a set of skills and knowledge that enables an individual to make informed and effective decisions using their available financial resources (Tortorice, 2020). Accordingly, financial literacy is of great importance for making financial decisions; it improves the abilities of people to act as a producer, consumer, saver, investor and a conscious citizen (Kotte and Witt, 1995). Decisions made by illiterates in this sense, might result in financial mistakes or even expose them, other individuals and the society at large to financial crises (Lusardi, 2008).

Lack of trust in the financial system was cited by approximately a fifth of adults who own no financial institution account (Global Findex, 2017). It is essential for individuals to engage in the financial sector (Devlin et al., 2015), as individuals commission financial institutions with their money, which is an agreement based on trust and requires confidence in the other party (Knell, & Stix, 2010; Filipiak, 2016). It is evident, trust plays an important role in demand; lack of trust affects the usage of financial services (Claessens, 2006).

Finally, Socio-economic variables belong to the demand side factors, that must be taken into consideration to assess financial inclusion and to be able to come up with suitable financial inclusion (Dev, 2006; Ramakrishna, & Trivedi, 2018; Yangdol, & Sarma, 2019). Researchers agreed, financial inclusion is driven by gender, education, age, income, and employment status, with a higher influence of education and income. (Soumaré et al. 2016; Zins and Weill, 2016; Sanderson, et al. 2018).

Hypothesis and Methodology

The study hypothesizes that:

H1. Financial literacy is positively related to financial inclusion.

H2. Institutional trust is positively related to financial inclusion.

H3. Gender is negatively related to financial inclusion.

H4. Income is positively related to financial inclusion.

H5. Age is negatively related to financial inclusion.

H6. Education is positively related to financial inclusion.

H7. Work status is positively related to financial inclusion.

The following equation captures such phenomena in mathematical form:

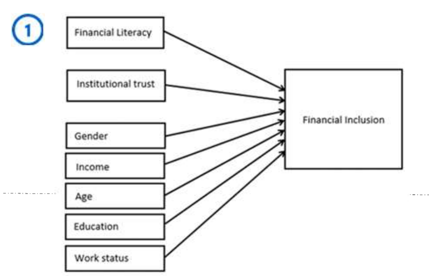
$$FIi = \alpha 0 + \beta 1FLi + \beta 2ITi + \beta 3Gi + \beta 4Ii + \beta 5Wi + \beta 6Edui + \beta 7Agei + \mu$$

For the author to be able to go beyond the simple ownership of bank accounts and focus on the actual use of financial services and frequency of account use as a measure of usage, a decision was made to employ a structured survey to collect primary data from the demand side in Egypt, Cairo.

- Research design: conclusive
- Research type: cross-sectional
- Research method: quantitative method

The survey included a set of questions from different sources. The author used the financial survey created by the World Bank; questions are adapted from the Global Findex questionnaire. Additional questions from the OECD/INFE questionnaire were integrated into the questionnaire used for this study.

1



Conceptual Framework

2

Source: Global Findex database

Results

	Financial inclusion				
	Global Findex	OECD index (average)		OECD index (total)	
	OLS	OLS	GLM	OLS	GLM
Constant	2.475***	0.759***	0.759***	1.974***	1.974***
	(0.190)	(0.129)	(0.129)	(0.482)	(0.482)
Institutional trust	0.073***	0.032*	0.032*	0.075	0.075
	(0.024)	(0.016)	(0.016)	(0.061)	(0.061)
Financial Literacy score	0.010	0.011**	0.011**	0.015	0.015
	(0.008)	(0.006)	(0.006)	(0.021)	(0.021)
Age	- 0.012***	0.002	0.002	0.002	0.001
	(0.002)	(0.001)	(0.001)	(0.005)	(0.005)
Work status	0.005	-0.035	-0.035	0.038	0.038
	(0.079)	(0.054)	(0.054)	(0.201)	(0.201)
Highest Education completed	0.550***	0.342***	0.342***	0.987***	0.987***
	(0.104)	(0.071)	(0.071)	(0.264)	(0.264)
Gender	0.059	0.053**	0.053**	0.053	0.053
	(0.041)	(0.028)	0.028	(0.103)	(0.103)
Income	0.250***	0.157***	0.157***	0.497***	0.497***
	(0.041)	(0.028)	(0.028)	(0.103)	(0.103)
R-squared	0.245	0.193		0.115	
Adjusted R2	0.234	0.180		0.101	
Durbin Watson	1.859	1.963		1.858	
F-statistic	20.85528	15.26727		8.292488	
Prob(F-statistic)	0.000	0.000		0.000	
No. of respondents	456				

Conclusion

The strategy to achieve financial inclusion differs from one community to another. Applying a solution that succeeded to improve financial inclusion in one country, will not necessarily yield the same results due to the different circumstances (Sharma, Jain & Gupta, 2014). Accordingly, the private and public sectors in developing countries (such as Egypt) are in need of localized studies, primary recent data and the use of quantitative methods, as its analysis has a substantial effect on policy implications and is instrumental to be able to create an environment that enables and supports financial inclusion and suits its society.

Unlike this study, attention of past studies is devoted to the excluded portion of the population, while the portion of the population who have access to formal financial services and own a bank account but are not sufficiently utilizing it or still resorting to informal non-bank financial services are neglected and considered included (Le et al., 2019). There is a lack of studies that go beyond the basic ownership of a bank account and is concerned with the extent as well as the frequency of usage of financial services (Allen et. al., 2016; Beck et. al., 2007).

Moreover, this study tackles the topic from a behavioral economics point of view, as the human factor related to financial inclusion as an economic matter is not investigated enough (Osovsky, 2013). Characteristics, attitudes and behaviors of inactive individuals in the financial sector are very insightful yet not referred to enough when implementing policies to promote financial inclusion and encouraging account use (Allen et. al., 2016; White & Yanamandram, 2004). More understanding of what factors correlated with the use of formal accounts is required (Allen et. al., 2016), which is covered by this research.

In addition, the most recent comprehensive data are from responses gathered during the year 2017 (Global Findex). Due to many changes; the technological revolution, the Fintech expansion as well as the improvement by countries and institutions in addition to the pandemic that took place, one can no longer fully rely on existing data at this point of time and consider it up to date. Furthermore, such data mostly exhibited shortcomings and missing information for many developing countries. Data is incomplete over the years, especially data in Egypt (Nguyen, 2020). Unfortunately, Egypt suffers from lack of up-to-date demand side data. Data available at hand allow us to know very little about the factors underpinning financial inclusion (Allen, et al. 2016). This study is contributes demand-side, up to date primary data, that provides multiple insights for Egypt regarding the subject.

Up to our knowledge the factors studied in Egypt encompassed financial literacy. However, financial literacy was mostly not assessed based on individuals/ respondents answering actual knowledge questions, nor through their financial behavior or attitude, which is a deficiency when referring to the financial literacy definitions found in the literature (Awad & Eid, 2018; Sayed & Shusha, 2019; Allgood and Walstad, 2016; Atkinson and Messy, 2012). This deficiency was accounted for and avoided in this study.

References

1. Atkinson, A.; Messy, F. *Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study. OECD Working Papers on Finance, Insurance and Private Pensions*; OECD Publishing: Paris, France, 2012.

2. Awad, M. M., & Eid, N. H. (2018). Financial inclusion in the MENA region: a case study on Egypt. *Journal of Economics and Finance, 9*(1).

3. Beck, T., Demirguc-Kunt, A., & Peria, M. S. M. (2007). Reaching out: Access to and use of banking services across countries. *Journal of financial economics, 85*(1), 234-266.

4. Claessens, S. (2006). Access to financial services: A review of the issues and public policy objectives. *The World Bank Research Observer, 21*(2), 207-240.

5. Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings Papers on Economic Activity, 2013*(1), 279-340.

6. Demirgüç-Kunt, A., and L. Klapper (2012), Measuring Financial Inclusion. The Global Findex Database, The World Bank Policy Research Working Paper 6025, 61 pp.

7. Demirguc-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2018). The Global Findex Database 2017: *Measuring financial inclusion and the fintech revolution.* World Bank Publications.

8. Hogarth, J. M. (2002). Financial literary and family & consumer scences. *Journal of Family and Consumer Sciences, 94*(1), 14.

9. Jukan, M. K., & Softic, A. (2016). Comparative analysis of financial inclusion in developing regions around the world. *Economic Review: Journal of Economics and Business, 14*(2), 56-65.

10. Kotte, D., & Witt, R. (1995). Chance and challange: assessing economic literacy. Reflections on educational achievement. *Papers in Honor of T Neville Postlethwait.* Waxmann, Münster, 159-168.

11. Ramakrishna, S., & Trivedi, P. (2018). What determines the success of financial inclusion? An empirical analysis of demand side factors. *Review of Economics & Finance*, 14, 98-112.

12. Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of consumer affairs, 44*(2), 276-295.

13. Sharma, R. K., Jain, V., & Gupta, S. (2014). Financial Inclusion in Rural Oman: A Demand and Supply Analysis. *International Journal of Management and International Business Studies, 4*(3), 285-296.

14. Soederberg, S. (2013). Universalising financial inclusion and the securitisation of development. *Third World Quarterly, 34*(4), 593-612.

15. The World Bank. (2014). Financial Inclusion: Global Financial Development Report. The World Bank.

16. White, L., & Yanamandram, V. (2004). Why customers stay: reasons and consequences of inertia in financial services. *Managing Service Quality: An International Journal.* Managing Service Quality Volume 14 · Number 2/3 · 2004 · pp. 183-194 Emerald Group Publishing Limited · ISSN 0960-4529 DOI 10.1108/09604520410528608

17. Yangdol, R., & Sarma, M. (2019). Demand-side factors for financial inclusion: A cross-country empirical analysis. *International Studies, 56*(2-3), 163-185.

GUC German University in Cairo

Prepared for Thesis Poster Display Conference

11th -12th June 2022

Faculty of Management Technology
THESIS Poster Display Conference 2022